1. Aiguo

Program Name: Aiguo.java   Input File: aiguo.dat

Aiguo is an avid reader and really loves grammar. He enjoys reading proofs of works, and gets to make changes to these works before they get published! However, he has noticed that it is incredibly time consuming to really highlight the changes he makes in these electronic versions. What Aiguo really wants is the ability to just make the changes he sees fit with his expertise and have a program analyze the changes he made to report to the publisher.

The changes that Aiguo makes can be represented by deletions or additions to the original text. He gets an initial work, then will either add or remove words and characters to improve and revise the works. He would like you to write a program that can identify which characters he removed and added by looking at the initial and final version of his work.

Input: The first integer will represent the number of data sets to follow. The first line of each data set will be the initial work, before Aiguo's changes. The second line of each data set will be the final work, after Aiguo's changes.

Output: Each data set should have 3 lines of output. The first, labeled "added: " will be the characters that Aiguo added to the initial text. The second, labeled "removed: " will be the characters that Aiguo removed from the initial text. The last, labeled "unchanged: " will be the characters that Aiguo did not change. Each of these should be listed in the order that the changes were made. If there exists an exchange where it was ambiguous if a correction was an additional of one word or the removal of another, choose to state the correction that comes first in the text.

Assumptions: Each work will be on one line.

Sample Input:
```
3
the brown fox curiously jumped over the sad dog
the quick brown fox jumped over the lazy dog
Ceci n'est pas ma femme.
Ceci est ma femme.
I love chocolate!
He loves chocolates!
```

Sample Output:
```
removed: curiously sd
added: quick lzy
unchanged: the brown fox jumped over the a dog
removed: n'pas
added:
unchanged: Ceci est ma femme.
removed: I
added: Hess
unchanged:  love chocolate!
```